

Chapter Four

Financial Management

Introduction

We continued to carry out our primary financial management functions: accounting for the program's assets, liabilities, and cash flows; quantifying the program's long-range financial needs; and managing the investment of civilian revenues so that they are available to meet program requirements.

Program Funding

The Nuclear Waste Policy Act requires that the costs of disposing of spent nuclear fuel and high-level radioactive waste be borne by the parties responsible for the generation of these wastes. The Act left it up to the President to determine whether civilian and defense-related wastes should be emplaced in the same repository. On April 30, 1985, the President issued a decision that they should be, with each party paying its proportional share of the full cost. To implement that decision, public rulemaking was used to develop a methodology for allocating defense and civilian costs. The result was published in the *Federal Register* in August 1987. The program's accounting system is consistent with this methodology.

Program revenues: ratepayer dollars for civilian waste

The Nuclear Waste Policy Act provides for two types of fee to be levied on the owners and generators of civilian spent nuclear fuel: an ongoing fee of 1.0 mil (one tenth of one cent) per

kilowatt-hour on nuclear electricity generated and sold after April 7, 1983, and a one-time fee for all nuclear electricity generated and sold prior to that date. The fees are defined in the *Standard Contract for Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste*, which was promulgated in 1983 and executed between the Department and the owners and generators of the waste. Nuclear power producers make quarterly payments of the ongoing fee. For the one-time fee, the contract allowed owners to choose to pay immediately or defer payment and incur interest. Contract holders chose to pay approximately \$1,400 million and to defer approximately \$900 million.

Fees for spent nuclear fuel disposal are deposited in the Nuclear Waste Fund, a separate account in the U.S. Treasury that is managed and administered by the Department of Energy. Amounts not appropriated for current expenses, consistent with budgetary strictures, are invested in U.S. Treasury securities. OCRWM manages these investments strategically to ensure that the long-term costs of waste disposal can be met.

The program earns civilian revenue when nuclear power plants generate and sell power, when the program earns interest or realizes capital gains on U.S. Treasury investments, and when interest is charged on the utilities' unpaid fee balances. During Fiscal Year 1998, the program earned \$1,191 million in civilian revenue. Fiscal Year 1998 civilian revenue consisted of \$608 million in ongoing 1 mil/kWh fees, \$116 million in interest on and adjustments to one-time fees, and \$467 million in investment earnings. The cumulative civilian

	CIVILIAN					DEFENSE			Grand Total
	1 mil/ kWh Fee	One- Time Fee	Interest on fees	Return on Investment	Civilian Total		Interest on fees	Defense Total	
						Fees			
FY 1998 ¹	608	0	116	467	1,191	210	156	366	1,557
Cumulative through FY 1998 ²	7,785	2,337	1,444	3,745	15,311	1,452	652	2,104 ³	17,415
Paid by Waste Owners ⁴	7,631	1,457	29	3,661	12,778	929 ³		929	13,707
Receivable ⁵	154	880	1,415	84	2,533	1,175 ³		1,175	3,708
<div>1 From Note 14 to the Financial Statements (Appendix A). The defense fee includes \$106 in FY 1998 revenues and \$104 in adjustments to prior years. Defense interest includes \$58 for FY 1998 and \$98 for adjustments to prior years.</div> <div>2 Cumulative totals are calculated by adding the FY 1998 values to cumulative amounts in the FY 1997 Financial Statements.</div> <div>3 From Note 2 to the Financial Statements. Defense payments include the \$12.5 million paid by the Department into the Nuclear Waste Fund, Defense Nuclear Waste Disposal appropriations, and credits to the Government for use of the Nevada Test Site facilities. Because payments are credited against the balance due and not separated into interest and principal, only one number is shown on the Paid and Receivable lines.</div> <div>4 Paid amounts are calculated by subtracting the Receivable amount from the cumulative total.</div> <div>5 From the <i>Balance Sheet</i> in the Financial Statements.</div>									

Table 4-1
Cumulative Program revenue as of September 30, 1998
(in millions of dollars)

revenue, as of September 30, 1998 (shown in Table 4-1), was \$15,311 million, of which \$12,778 million had been paid and \$2,533 million remained unpaid. Civilian revenue includes \$3,745 million in earnings on U.S. Treasury investments, of which \$3,661 million has been paid and \$84 million was due with the next semiannual interest payment.

On September 30, 1998, the market value of Nuclear Waste Fund investments was

approximately \$8,611 million, compared with \$6,947 million at the end of Fiscal Year 1997.

Program revenues: taxpayer dollars for defense waste

The Department of Energy's Office of Environmental Management and the Office of Nuclear Energy's Naval Nuclear Propulsion Program are the custodians of the Department's

inventory of high-level radioactive waste and spent nuclear fuel. During 1998, OCRWM completed separate memoranda of agreement with the Office of Environmental Management and the Office of Nuclear Energy's Naval Nuclear Propulsion Program for the acceptance of DOE-owned high-level radioactive waste and spent nuclear fuel. The memoranda of agreement establish detailed arrangements for the acceptance, transportation, and disposal of DOE high-level radioactive waste and spent nuclear fuel. They assign responsibilities for the transportation of spent nuclear fuel and high-level radioactive waste to OCRWM facilities, define the process for documenting a payment schedule for the disposal fees (which are equivalent to those paid by civilian utilities), prescribe the development of a waste acceptance schedule, and provide for appropriate control of interfaces.

Table 4-1 also shows program revenue from defense sources. Defense revenue is earned when the program incurs costs related to defense waste disposal and when interest is charged on unpaid defense balances. During Fiscal Year 1998, the program earned \$366 million in defense revenue, which included \$210 million in fee revenue and \$156 million in interest on deferred fees. Fiscal Year 1998 defense revenues reflect the re-estimation of prior-year costs in the 1998 Total System Life Cycle Cost (TSLCC) estimate. The program's cumulative defense revenue as of September 30, 1998, consisted of \$1,452 million in fees and \$652 million in interest, for a total of \$2,104 million. Of the total, \$929 million had been paid and \$1,175 million (including interest) remained unpaid.

Program expenditures

Congress makes two separate appropriations for the program, one from the Nuclear Waste Fund, the other through a Defense Nuclear Waste Disposal appropriation. These appropriations are

recorded in separate internal accounts; however, they are consolidated in the OCRWM financial statements.

Expenditures from the Nuclear Waste Fund and the Defense Nuclear Waste Disposal appropriation are subject to the Federal budget process. They are considered part of the discretionary portion of the budget and thus compete for resources with other discretionary spending programs. As a consequence, although the Nuclear Waste Fund is composed of dedicated ratepayer money, it is included in the total spending limits imposed on general Federal programs. Historically, this has resulted in constraints on program funding.

As shown in Table 4-2, cumulative program expenditures were \$6,011 million, of which \$4,559 million was allocated to civilian and \$1,452 million to defense waste disposal activities. Through Fiscal Year 1998, Congress had appropriated a total of \$5,890 million for the program and related activities under the Nuclear Waste Policy Act.

The OCRWM Financial Statements for Fiscal Year 1998 and the report of OCRWM's independent auditor are at *Appendix A*.

Long-Range Financial Planning

Estimating Total System Life Cycle Costs (TSLCC)

During Fiscal Year 1998, we conducted a new TSLCC analysis to support the site viability assessment. It was issued concurrently with and as a companion document of the viability assessment in Fiscal Year 1999. The TSLCC analysis represents a preliminary estimate based on the viability assessment design approach and the assumptions concerning development and operation of the system specified in the TSLCC. We will continue to analyze alternative designs and approaches for implementing the repository

	CIVILIAN	DEFENSE ¹	TOTAL ²
FY 1998	322	106	428
Cumulative through FY 1998 ³	4,559	1,452	6,011
Paid by Program ⁴	4,511	1,448	5,959
Payable	48	4	52
Appropriations ⁵	4,987 ⁶	903 ⁷	5,890
<p>1 From Note 14 to the Financial Statements (Appendix A). Defense expenditures and defense fees are equal, by definition of defense fees. Civilian expenditures are the difference between total expenditures and defense expenditures.</p> <p>2 Total expenditures are not equal to total appropriations because: 1) civilian expenditures include \$135 million in interest on utility overpayments, most of which was funded through fee credits, i.e., not through appropriations; 2) capital expenditures are amortized in the financial statements; and 3) some appropriated funds were carried over into FY 1999 from FY 1998.</p> <p>3 Cumulative totals are calculated by adding FY 1998 values and adjustments to the amounts in the FY 1997 Financial Statements. Adjustments to defense and civilian shares are plus and minus \$104, respectively, based on the 1998 Total System Life Cycle Cost Analysis.</p> <p>4 The paid amount is the difference between total expenditures and payables. (Payables are amounts owed by the program that have not yet been paid.)</p> <p>5 Based on historic appropriations legislation - not discussed in the Financial Statements in Appendix A.</p> <p>6 Includes \$235 million appropriated from the Nuclear Waste Fund to the Nuclear Regulatory Commission, the Nuclear Waste Technical Review Board, and the now defunct Office of the Nuclear Waste Negotiator.</p> <p>7 Does not include \$85 million appropriated in FY 1996, which is reserved pending statutory authority to develop an interim storage facility. Also does not include \$12.5 million paid into the Nuclear Waste Fund in FY 1991 and FY 1992.</p>			

Table 4-2
Cumulative Program expenditures as of September 30, 1998
(in millions of dollars)

system. The total estimated future cost to complete the program is \$36.6 billion, in constant 1998 dollars. This will cover program activities from 1999 through closure and decommissioning, which is assumed to be in 2116.

Ensuring cost recovery

The Nuclear Waste Policy Act requires that the owners and generators of spent nuclear fuel and high-level radioactive waste pay the full disposal costs of their wastes. The cost sharing methodology published in the Federal Register and the TSLCC are used as the basis for distributing

costs between civilian and defense waste owners. Although the projected costs in the TSLCC are subject to estimation, economic, and fee revenue uncertainty, they provide the best estimate available.

The Nuclear Waste Policy Act requires an annual assessment of the adequacy of the 1-mil/kWh fee paid by nuclear power generators. Historic and future fee payments, plus interest earnings, must be adequate to cover the civilian cost share based on the most recent TSLCC. The latest fee adequacy assessment, published as a companion document of the viability assessment, finds that the

current fee is adequate, and recommends that the fee not be changed. The Nuclear Waste Fund is projected to have a positive balance at the end of waste emplacement activities, based on current cost estimates for the reference program, fee revenue projections, and independent projections of escalation and interest rates. This balance is expected to be sufficient to fund planned monitoring, closure and decommissioning actions, and to allow for probable contingencies such as implementation of design options or extended monitoring.

Defense payments must cover historic and current-year costs at the time waste is accepted for disposal. The cost share in each new TSLCC is used to re-estimate historic and future costs. Adjusted costs are used to recalculate the defense payment schedule so that payments will be up-to-date in time for waste acceptance.

Managing investments

The objectives of OCRWM's investment strategy are to: (1) ensure that investment income is available when needed, (2) support the adequacy of the fee paid into the Nuclear Waste Fund by waste owners and generators, and (3) hedge against uncertainty and unplanned funding requirements. To achieve these objectives, the Nuclear Waste Fund is managed as two portfolios: a contingency portfolio and a match portfolio. The purpose of the contingency portfolio is to hedge against reasonable contingencies, such as unexpected near-term expenditures. The purpose of the match portfolio is to provide reliable funding for expected program expenditures. It serves to bring into balance the program's assets and liabilities and to maintain that balance. The contingency portfolio is highly liquid and consists of Treasury securities whose average maturity

does not exceed 3 years. The match portfolio consists of a mix of Treasury bills, notes, bonds, and zero-coupon bonds. The durations and present values of these investments are matched or will be matched, year-for-year, to the durations and present values of the program's projected liabilities. Matching investments to planned spending reduces the sensitivity of the fee adequacy balance to changing interest rates. Each month, near-term cash flow expectations and current asset and liability values are reassessed and used as the basis for investment selection. The portfolio is rebalanced, as required, upon completion of each new total system life cycle cost analysis or when changes in program assumptions warrant.

Over the last year, Nuclear Waste Fund investments earned a market value return of 17.9 percent, exceeding the return of the average long-term U.S. Treasury bond fund by 5.4 percentage points. Over the last 10 years, the Nuclear Waste Fund average return has been 9.82 percent, compared with the average long-term U.S. Treasury bond fund's return of 8.80 percent. The Nuclear Waste Fund average annual return, since inception, has been 8.43 percent.

Civilian Radioactive Waste Research and Development Account

We also administer the Civilian Radioactive Waste Research and Development account, which, like the Defense Nuclear Waste Disposal appropriation, is supported by general taxpayer revenues. It pays for generic research, development, and demonstration activities authorized by Title II of the Nuclear Waste Policy Act. There was no appropriation to this account for Fiscal Year 1998; only funds carried over from prior years were spent.